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ABSTRACT

This report examines current state practices and procedures for assessing vocational education programs in light of the evaluation requirements of the 1976 Vocational Education Act Amendments. The report is based on information obtained through personal and telephone interviews with vocational education administrative personnel in the states, along with a review of data collection forms and evaluation guidelines. The survey found that there were many problems in the states, such as the following: (1) insufficient funds to conduct or monitor evaluations; (2) insufficient staff who are trained in evaluation and data analysis to design and use evaluation procedures; (3) lack of access to information processing facilities; (4) lack of clarity about the intent of the law; and (5) inaccuracy in reporting, resulting in an incorrect assessment of program operations. The study found that, in general, states have been more concerned with the issue of compliance--having some evaluation procedures in place for use in 1978-79--than with the development of a comprehensive and sound evaluation system. The study also found that of the three evaluation components in the regulations, states' efforts have largely centered on the development or revision of the program review and follow-up components, while little effort has been expended in the area of student achievement. Finally, the study concluded that, although the vocational evaluation state-of-practice has considerably revived as a result of the 1976 Amendments, it is in a transitory state and needs further efforts. (KC)

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STATE OF THE ART REVIEW OF VOCATIONAL EDUCATION EVALUATION:

STATE EVALUATION PROCEDURES AND PRACTICES

BY

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Ester Gottlieb Smith, Ph. D.
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STATE EVALUATION PROCEDURES AND PRACTICES

A. Overview

The passage of the 1976 Education Amendments began a surge of activities across the nation for the development, expansion or modification of vocational education program evaluation procedures. Prior to the 1976 mandate, state evaluations were often conducted on an informal and unsystematic basis, dependent on the initiative and capabilities of local school personnel, as evidenced by both the 1974 General Accounting Office Report[1] and the 1975 congressional hearings on the effectiveness of vocational programs.[2] State evaluation activities before the 1976 law also concentrated mostly on the program's operational processes; follow-up evaluations were conducted in a small number of states, primarily on a local basis, while student achievement evaluations were rarely conducted at all.

Considerable effort by states was therefore required to meet the evaluation requirements of the 1976 Amendments, particularly in the areas of student achievement, student employment success, employer satisfaction, and special populations. With limited evaluation funds, with available staff frequently not proficient in evaluation, and with limited time for complying with the evaluation mandate, many states were unable, by Spring 1978, to bring their evaluation system into full compliance with the new law. Moreover, states' efforts have been oriented toward "having some evaluation procedures in place" rather than on having a sound, quality evaluation system. Therefore, methodological issues (i.e., control group, high response rates in follow-up surveys, reliability and validity of obtained data, and aggregation of data), the linkage between the three evaluation components (i.e., program planning and operational processes, student achievement, and student employment success), and the use of evaluation results in program planning and improvement have not been given the necessary attention by most states to date.

Vocational education program evaluation is in a state of transition. Although considerable effort had been expended by Spring 1978, additional effort is necessary both in the development and refinement of evaluation procedures as well as in the effective dissemination and utilization of evaluation results.

This report examines current state practices and procedures for assessing vocational education programs in light of the 1976 legislation. Particular attention is given to states' efforts and success in complying with the requirements of the mandate for State Boards of Vocational Education to evaluate the extent to which they are operating "the best possible programs in vocational education."[3]

1. Methodology

This report is based on information obtained through personal and telephone interviews with SEA staff members who had been identified by their

respective State Directors of Vocational Education as knowledgeable about evaluation procedures in their state.* The majority of informants were members of State Boards of Vocational Education, a few were members of State Advisory Councils for Vocational Education (SACVE), independent consultants assisting SEAs in developing or implementing evaluation procedures, or State Directors themselves. In addition to the interviews, SEA data collection forms and evaluation guidelines were reviewed.

Early in the review of states' evaluation practices it became clear that vocational education evaluation is in a state of major transition at the present time. This has been evidenced by the extensive efforts many SEAs are putting forth to revise existing evaluation systems or develop new systems to meet the legislative mandate. In many cases, states have attempted to accomplish the required tasks without additional staff or funds, thus slowing down the process of the development or revision of evaluation systems. As a result, many states are still in the planning or pre-implementation stages of evaluation and, consequently cannot provide descriptions of evaluation materials, procedures, or uses of findings at this time.

In reporting SEAs' practices and procedures, distinctions must be made between state evaluations which have already been implemented, those which have only been pilot tested and are presumed ready for implementation, and those which are still in the planning stages. Furthermore, the descriptive data reported in this chapter and the subsequent assessment of state vocational education evaluation practices made on the basis of these data are limited by the incompleteness of presently available data and by the continuing changes being made in state evaluation plans and materials.

It must also be noted that this report is based on information that was available in the Spring of 1978. Changes may have occurred since that time, in light of unanticipated problems in planning or pilot testing, especially in those states which have required extensive revision or development of new evaluation systems to meet the mandate.

In light of the present transitory state of vocational education evaluation, this chapter can not provide a precise statistical accounting of evaluation practices and procedures across the nation. Furthermore, the tentative nature of some of the available information limits judgments about states' compliance with the law or the quality of the evaluations, per se, since many SEAs can currently report only what they plan to do, not what they actually do. The following chapter provides an overview of the major patterns and trends in state vocational education evaluation at the present time. To further highlight these patterns and trends, examples of individual state practices have been included.

Three matrices are also included in order to provide further illustration of (1) states' current readiness to evaluate, (2) topics covered by states' evaluation, and (3) the evaluation procedures which states plan to use in the coming year to comply with the mandate. Two points must be made, however, relative to interpreting the presentations in each matrix. First, the structure of each matrix has been determined by the level of detail and the amount of information that was available from each state. Indeed, the large variations in the amount and detail of state information made it in-

*State by state evaluation descriptions appear in a separate report: "State of the Art Review of Vocational Education Evaluation: State Descriptions."

appropriate to attempt a highly detailed matrix of the practices and procedures in all 50 states. Secondly, the information recorded for each state within a given matrix may not always be complete, since informants were, in some cases, unable to report specific elements. Both these difficulties are largely due to the continuing changes wrought by states' need for further planning and revision of current evaluation procedures, the reinterpretation or clarification of the legislation, or the present inability of state officials to provide certain data. Thus, the matrices are intended to provide an overview of the "state-of-practice" in the Spring of 1978, rather than present a highly detailed report of state practices which can only be accomplished when the 50 state systems are more firmly in place.

2. The Mandate to Evaluate

At the present time, a description of the state-of-practice in vocational education must necessarily address states' responses to the Education Amendments of 1976, since the legislation (PL 94 482) gave impetus to SEAs' activities to prepare for evaluation. Of particular concern to those responsible for evaluating vocational education programs is the section of the law reading:

> "(b)(1) In order for the States to assist local educational agencies and other recipients of funds in operating the best possible programs of vocational education--
>
> "(A) each State shall, during the five-year period of the State plan, evaluate the effectiveness of each program within the State being assisted with funds available under this Act; and the results of these evaluations shall be used to revise the State's programs, and shall be made readily available to the State advisory council; and
>
> "(B) each State shall evaluate, by using data collected, wherever possible, by statistically valid sampling techniques, each such program within the State which purports to impart entry level job skills according to the extent to which program completers and leavers--
>
> "(i) find employment in occpuations related to their training, and
>
> "(ii) are considered by their employers to be well-trained and prepared for employment, except that in no case can pursuit of additional education or training by program completers or leavers be considered negatively in these evaluations.

The ensuing Regulations issued by the U.S. Office of Education in 1977 have also been of considerable interest to SEAs, as they provide more prescriptive guidelines for SEA evaluations. Specifically, these are:

> The State board shall, during the five-year period of the State plan, evaluate in quantitative terms the effectiveness of each formally organized program or project supported by Federal, State, and local funds. These evaluations shall be in terms of:

(a) Planning and operational processes, such as:
(1) Quality and availability of instructional offerings;
(2) Guidance, counseling, and placement and follow-up services;
(3) Capacity and condition of facilities and equipment;
(4) Employer participation in cooperative programs of vocational education;
(5) Teacher/pupil ratios; and
(6) Teacher qualifications.
(b) Results of student achievements as measured, for example, by:
(1) Standard occupational proficiency measures;
(2) Criterion referenced tests; and
(3) Other examinations of students' skills, knowledge, attitudes, and readiness for entering employment successfully.
(c) Results of student employment success as measured, for example, by:
(1) Rates of employment and unemployment;
(2) Wage rates;
(3) Duration of employment; and
(4) Employer satisfaction with performance of vocational education of persons who have not had vocational education.
(d) The results of additional services, as measured by the suggested criteria under paragraphs (a), (b), and (c) of this section, that the State provides under the Act to these special populations:
(1) Women;
(2) Members of minority groups;
(3) Handicapped persons;
(4) Disadvantaged persons; and
(5) Persons of limited English-speaking ability.

(Implements Sec. 112 (b)(1); 20 U.S.C. 23312.)

States have used the Regulations, rather than the law, for designing or revising their evaluation systems. Specifically, the Regulations have been instrumental in shaping states' interpretation of the mandate to evaluate program "quality" and "effectiveness" in terms of three interrelated components: program planning and operational processes, student achievement, and student employment success. Moreover, in some states, only the specific program elements mentioned in the Regulations such as "capacity and condition of facilities and equipment", "teacher/pupil ratios", and "teacher qualifications" were included in the evaluation. The following descriptions of state evaluation practices and procedures will be examined and organized along these three components.

B. Purposes of Evaluation and Potential Uses of Findings

A major purpose of the new legislation is that evaluations be conducted by State Boards of Vocational Education to provide state, district, and institution staff with information which will assist them in "operating the best possible programs of vocational education" through more enlightened planning, administration, and program improvement.[4]

While each state reported evaluation purposes which imply the use of evaluation results, many states could neither describe nor document how

information generated by evaluations are actually used. Indeed, the review of state evaluation practices and procedures revealed that the weakest component in state evaluation activities is the utilization and dissemination of evaluation data to state personnel.

States tended to identify the following evaluation purposes:

- program improvement at the state, local or institutional level;
- program planning at the state, local or postsecondary institutional level;
- fiscal accountability to state and federal authorities
- education accountability; and
- compliance with Federal or state requirements to evaluate or report on program operations.

1. Program Improvement

Thirty two states have cited program improvement as a reason for conducting evaluation. This purpose is, in some cases, reflected in the design of evaluation procedures for assessing program strength and weakness through local or postsecondary institutional self evaluation, independent program review by evaluators outside the district or institution, and a systematic sharing of findings between the district or institutional staff and the outside evaluators. For example, the Ohio, Illinois, and Minnesota evaluation systems include a local or institutional self review, an on-site team evaluation, and an in-depth exit interview, during which the local or institutional staff and the outside evaluators fully discuss program strengths and weaknesses, formulate recommendations for program improvement, and develop plans for implementing the recommendations. In at least one instance (Michigan), evaluation findings are also used at the SEA level to determine to what extent the state agency, itself, has achieved an efficient distribution of resources, coordinated program offerings throughout the state, and provided sufficient administrative support to local and institutional programs.

However, of the 32 states citing program improvement as a major purpose of evaluation, nearly two-thirds do not have a SEA monitoring or technical assistance procedure to ensure that recommendations have, in fact, been implemented. Moreover, of the 11 states which do report some type of post evaluation follow up, at least three have indicated that "program improvement" means bringing a program into compliance with the state and federal law, not the improvement of the program quality in terms of its effectiveness or its operations.

2. Program Planning

Approximately ten states report that evaluation is conducted to provide information for developing one and five year plans at the state,

local or institutional levels. Planning activities may consist of program development, distribution of resources (i.e., staff, funds, facilities and equipment), and coordination with other occupational training programs which exist in the state. In Illinoise, evaluation is considered an integral part of state and local or institutional planning procedures; evaluation procedures are sequenced to provide the SEA, districts and schools or institutions with information about program operations keyed to the development of one and five year plans.

However, in most of the states which report program planning as a purpose for conducting evaluation, the connection between the planning process and evaluation is not explicit. Specifically, although these states report "planning" as a major reason for conducting evaluation, there is little evidence of whether and how evaluation information is actually used--or in some cases accessed--by the planning staff for the development of one and five year plans.

3. Fiscal Accountability

Eleven SEAs have identified fiscal accountability as a major purpose of evaluation. In these cases, evaluation consists of an annual financial audit of expenditures of state vocational education funds. Evaluation activities in these states are usually engendered by state law and findings of the audit/evaluation are reported to the state legislature annually.

4. Educational Accountability

Educational accountability (i.e., program effectiveness in training students for jobs) has been cited as a primary purpose of evaluation by six states. At least two of these (Maryland and North Carolina) have educational accountability laws which require all educational programs to report and document how well schools are serving students' needs. These states also use evidence generated by educational accountability evaluations to publicize their programs in order to attract new students to the program and to gain community support, especially in terms of placing vocational students after program exit. Clearly, these evaluations stress the accomplishments rather than the weaknesses of the programs which have been assessed.

5. Compliance with Federal or State Requirements

At least nine SEAs report that they conduct evaluations mainly to be in compliance with federal and state laws. The implication that these states would not systematically evaluate at the state level without the legal incentive is born out by the fact that eight of the nine states citing compliance as a purpose of evaluation either had no evaluation system in place at the time the 1976 law was passed or did not then use their previous evaluation systems. The only state (North Carolina) which did conduct evaluations before the 1976 Amendments has received, following the passage of a state educational accountability law, substantial state funding for the expansion and implementation of an improved evaluation

system. In light of the 1976 Amendments, the eight states which did not conduct previous evaluations have developed plans to conduct evaluations in the coming year. However, two of these states reported that the information required by the 1976 Amendments and the ensuing Regulations was not relevant to their state needs.

C. Evaluation Practices

Evaluation practices are examined in terms of how state agencies are currently preparing to meet the 1976 legislative mandate to:

- evaluate program "quality," as indicated by planning and operational processes;
- evaluate program "effectiveness," as indicated by:
  - evidence of student achievement in acquiring the knowledge and skills required to enter the world of work; and
  - evidence that former students have obtained employment in an area related to their vocational training and that employers are satisfied with the performance of former vocational students.

Specifically, these practices are discussed in relation to:

- current status of evaluation systems across the states;
- educational levels addressed by SEA evaluations;
- the context for evaluating "quality" and "effectiveness"; and
- indicators of "quality" and "effectiveness."

1. Current Status of Evaluation Across the States: Spring 1978

State responses to the 1976 legislative mandate to evaluate vary across the country (see Matrix #1). SEAs' level of preparedness to conduct evaluations in the coming year depend on the extent to which program evaluations were conducted prior to the 1976 law, on staff perceptions of the importance of evaluation, and on the resources (i.e., funds and staff) that are available for carrying out evaluation activities. It is difficult to determine from available documents and conversations with SEA personnel which states have actually engaged in systematic program evaluation in the past and to which extent existing state evaluation systems are in compliance with the new legislation.

At the present time, states can be divided into four major categories with regard to their preparedness to conduct evaluations.

- states with existing evaluation systems, not planning to revise;

MATRIX #1: CURRENT STATUS OF EVALUATION BY STATE

Status of Evaluation / State	PROGRAM REVIEW						STUDENT ACHIEVEMENT						FOLLOW UP SURVEY							
			New System						New System						New System					
	Existing syst. to be used	Existing syst. revised	Complete and p.t. ed.	Ready for p.t.	Developmental	No decision yet but plan revise	Existing syst. to be used	Existing syst. to be revised	Compete and p.t. ed.	Ready for p.t.	Developmental	No decision yet	Existing syst. to be used	Existing syst. revised	Complete and p.t. ed.	Ready for p.t.	Developmental	No decision yet	Content and Proceed at LEA only	
Alabama				•			n/i								n/i					
Alaska ⊙					•															
Arizona		•									•			•						
Arkansas			•				n/i							•						
California		•					n/i						•							
Colorado			•										•							
Connecticut*	•												•							
Delaware		•									•				•					
Florida		•					n/i							•						
Georgia			•												•					
Hawaii		•					•										•			
Idaho		•												•					•	
Illinois	•												•						•	
Indiana	•						n/i						n/i							
Iowa						•	n/i							•						
Kansas ⊙					•		n/i							•						
Kentucky ⊙					•			•						•	•					
Louisiana						•	n/i						•						•	
Maine					•												•			
Maryland			•											•						
Massachusetts		•												•						
Minnesota	•											•	•							
Michigan ⊙					•		•							•						
Mississippi	•												•							
Missouri	•						n/i						•							

⊙ planning stages: information requirements for evaluation not determined.

n/i no information available, spring 1978.

* post-secondary only

MATRIX #1: CURRENT STATUS OF EVALUATION BY STATE

Status of Evaluation / State	PROGRAM REVIEW						STUDENT ACHIEVEMENT						FOLLOW UP SURVEY						
			New System						New System						New System				
	Existing syst. to be used	Existing syst. revised	Complete and p.t. ed.	Ready for p.t.	Developmental	No decision yet but plan revise	Existing syst. to be used	Existing syst. to be revised	Compete and p.t. ed.	Ready for p.t.	Developmental	No decision yet	Existing syst. to be used	Existing syst. revised	Complete and p.t. ed.	Ready for p.t.	Developmental	No decision yet	Content and Proceed. at LEA only
Montana		•											n/i						
Nebraska				•			n/i										•		
Nevada					••				•								•		
New Hampshire ⊙					••		•								•				
New Jersey ⊙					•				•								•		
New Mexico	•						n/i						n/i						
New York						•	n/i						•						•
North Carolina	•						•						•						
North Dakota						•								•					
Ohio	•						•							•					
Oklahoma	•											•	•						
Oregon			•						•					•					
Pennsylvania	•						n/i						•						•
Rhode Island						•						•	•						
South Carolina			•						•				•						•
South Dakota ⊙						•						•				•			
Tennessee	•												•						
Texas	•	•											•						•
Utah	•						•						•						
Vermont		•									•		•						
Virginia				•									•						
Washington					•						•					•			
West Virginia		•								•						•			
Wisconsin			•				n/i						•						
Wyoming		•												•					

- states with existing evaluation systems, planning to revise or implement additional evaluation efforts in light of the new law;

- states developing completely new evaluation systems or adopting existing evaluation systems which have been developed elsewhere;

- states that have delayed decisions on how they will comply with the new law.

Each of these categories is described in greater detail in the following sections:

a. No Revision Planned for 1978-79

In addressing the evaluation of program quality and effectiveness, the 1977 Regulations cite the need to assess three components: program planning and operational processes, student achievement of competencies, and student employment success. Many SEAs plan to use their current procedures for evaluating program operations or student employment success without any revisions, even when their evaluation components do not include information on special populations or employer satisfaction or a student achievement component. Furthermore, these SEAs also do not plan to develop, at this time, a student achievement evaluation component although required by law. Of these states, only North Carolina and Utah have a three component evaluation system. When these states' evaluation components are examined individually, the following profile emerges.

Approximately 13 SEAs plan to use existing procedures and materials to evaluate program planning and operations (i.e., program review), in the coming year. Eight of these SEAs believe that their procedures meet the evaluation requirements of the new Regulations. Five states, however, have existing evaluation procedures which administrators do not believe will meet the program review evaluation requirements in the legislation. these SEAs have reported that they cannot afford, or are otherwise unprepared, to revise existing procedures at this time. They have, however, indicated that they plan to revise their systems at a later time, as feasible.

Five states will continue to use existing mechanisms to determine student achievement of competencies. These statewide mechanisms include standardized achievement testing (Ohio and North Carolina), student ratings based on competency based performance objectives (Hawaii and Michigan), and reports of degrees awarded and student achievement on state licensing and certification tests (Utah). In each case, the SEA has found the information on student competency levels or achievement to be sufficient to determine whether or not programs are adequately preparing students for employment.

In the coming year, approximately 16 SEAs will continue to use existing follow up procedures for assessing students' employment success, although only six states will attempt to contact employees and employers as specified in the Regulations. Follow up survey approaches vary from

state centralized surveys, in which the SEA directly contacts students and/or employers for post-program information, to locally-based surveys in which teachers or other LEA staff contact students for information and subsequently pass this information on to the state.

b. Revision of Existing Practices and Procedures

In light of the new legislation, approximately 17 SEAs have revised their evaluation procedures in an attempt to meet the new legislative requirements. In some states, revisions are relatively minor and do not require a basic change in the evaluation procedures or in the level of effort invested by the state agency. For example, among the nine states revising existing program review procedures or materials:

- Texas and Delaware have revised existing instruments for data collection to include information on sex equity and special population characteristics.

- Vermont is revising its student enrollment form to increase the form's ease of administration in terms of recording data and making data more available for analysis.

Other revisions, however, have required more extensive changes. In some cases, the changes require the investment of greater effort by SEA staff either in preparing for the evaluation or in implementing it. Examples of the more extensive revisions are:

- Wisconsin has added a self-study evaluation component to its existing program review procedure, to more thoroughly involve the districts and postsecondary institutions in the evaluation process.

- Arizona is in the process of completing the development of state standards for program operations which will assist evaluators in determining the "quality" of programs.

- Idaho (one of the 12 SEAs revising follow up procedures) plans to conduct follow up surveys of former students at more frequent intervals than in the past.

- Iowa and Ohio are preparing to add an employer survey to their existing follow up survey procedures.

Most revisions, whether major or minor, appear to have been planned and executed by state agency staff, rather than contracted out to private firms, universities, or consultants. The extent to which these efforts have, in fact, brought individual state's evaluation practices into compliance with the new law, however, will not be clear until 1979 when the modified systems have been used on a state-wide basis. The revisions in general were aimed at getting states in compliance with the 1976 law rather than at improving the quality of the evaluation procedures or data obtained.

c. Development of New Systems or Adoption of Existing Procedures for Evaluation

At the time the new legislation was enacted in 1976, at least 14 SEAs either had never conducted evaluations or had been forced to discontinue earlier efforts to evaluate due to implementation problems. These state agencies, therefore, found it necessary to develop or adopt new evaluation procedures that respond to the requirements of the new law. These states can be classified into one of three stages of development:

- States which have completed the development of evaluation procedural guidelines and materials, pilot tested in 1977-78 and are ready to implement them in the 1978-79 academic year. These include Arkansas, Colorado, Georgia, Maryland, Oregon. South Carolina and Wisconsin.

- States which have completed the development of evaluation materials and procedures, but have not pilot tested them thus far. These states plan to conduct pilot tests in the summer and fall of 1978. SEAs planning to pilot test program review evaluations include, Alabama, South Dakota, Virginia, and Nebraska; those planning to pilot test follow up surveys are South Dakota, Washington, and West Virginia.

- States which are in the planning stages and have not yet developed instruments or finalized procedures. Most of these SEAs, however, plan to complete the development of evaluation procedures and materials for implementation in Fall 1978. These states include Alaska, Kansas, Kentucky, Maine, Michigan, Nevada, New Hampshire, New Jersey, and Washington for program review evaluations; those developing follow up surveys are Hawaii, Maine, Montana, Nebraska, and New Jersey.

States' approaches to developing new evaluation procedures or adopting existing ones vary. At least two state agencies (Maryland and Georgia) have contracted with private firms or a university to produce new evaluation procedures and materials for program review and follow up surveys. Others have developed new procedures and materials or have modified other states' procedures, utilizing SEA staff. For example:

- Alabama's state agency staff is modifying Illinois' program review procedures to meet the special needs of Alabama.

- Arkansas' SEA, with the assistance of the SACVE, is developing new evaluation guidelines and instruments for use in the coming year.

- Alaska, Kansas, and Michigan have established task forces to determine their states' respective needs for information, to establish procedures for conducting evaluation and to develop instruments for data collection. The task forces are comprised of representatives of the state board's research and planning unit, SACVE members, and other key SEA staff.

- Delaware's SEA staff has developed follow up procedures for conducting that state's first follow up study.

- North Carolina assigned evaluation staff to develop a management information system (MIS) to capture, coordinate, and make more available the information that is generated by existing evaluation procedures.

- West Virginia SEAs' staff have adopted student testing procedures and materials from VETECHS and from the State of Ohio.

In a few cases, SEA responses to the mandate have gone beyond the requirements of the law, (as exemplified by the Regulations). For example:

- Kentucky's newly developed evaluation system features multiple follow up surveys of former students for five years after students have left the program. This will provide state staff with a longitudinal data base that will indicate not only employment rates and job relatedness, as required in the legislation, but also information on patterns of employment and advancement on the job.

- Michigan's evaluation includes, in addition to a review of local and institutional program operations, an assessment of the SEA's activities in coordinating and administering programs and distributing resources statewide

d. Delayed Response to the Mandate

A number of SEAs have not been able to reach a decision on how to respond to the new mandate to evaluate program "quality" and "effectiveness". At least six states--Iowa, Louisiana, New York, North Dakota, Rhode Island, and South Dakota--plan to develop new systems or revise existing ones in the future, but have not done so in time for evaluating in 1978-79. In most cases, the delay is the result of insufficient staff or funds to undertake the necessary developmental or modification procedures. However, Louisiana and New York SEA officials feel that they will need greater clarification about the requirements of the new law before they can proceed to devise a system which will be in compliance.

Although most SEAs will attempt to comply in the coming year with the mandate to evaluate program planning and operational processes and student employment success, more than 30 states have not decided how they will comply with the mandate to determine student achievement competencies. This area of evaluation presents a special problem, since there are few existing examples for examination: Ohio, West Virginia, and North Carolina are among the few states which have a formal student achievement reporting system. This problem is compounded by lack of agreement, both within and across states, as to what constitutes an adequate or useful "measure" of student achievement. Among the SEAs delaying decisions to determine student achievement, many have reported that they will closely examine other states' approaches before establishing a student achievement reporting system in their state.

2. Educational Levels Addressed by SEA Evaluations

At the present time, much of the emphasis on program evaluation is directed toward the secondary and postsecondary levels. Forty-two states evaluate secondary programs, thirty-seven states evaluate postsecondary programs, while only seventeen states evaluate adult programs. The reasons for this emphasis on evaluating secondary and postsecondary programs appear to be twofold:

(1) In some states, responsibility for administering and evaluting adult programs resides in an agency outside the SEA; these agencies have apparently given less attention to evaluation than have the state agencies of education.

(2) Administrators report that adult program students are often difficult to identify, since they may be enrolled in only one course (i.e., to upgrade existing [illegible] or pursue a vocational interest through adult education [illegible]) rather than in a program.

At least 12 states use identical instruments and procedures to evaluate secondary and postsecondary programs, although these programs differ. Separate evaluations are conducted for each of these levels in states which have separate secondary and postsecondary bureaus of education; examples of this arrangement are seen in Indiana, Michigan, Minnesota, and Missouri. The conduct of identical or separate evaluations for secondary, postsecondary and adult programs are a result of whether one or more agencies administer the different levels. (See Matrix #2 for states with separate secondary and postsecondary bureaus).

3. Evaluation of Program "Effectiveness" and "Quality"

In requiring evaluation of program "quality" and "effectiveness", the legislation and the ensuing Regulations have created a need for SEAs to define the context in which programs will be reviewed. In doing so, approximately 22 states have developed standards of program "quality" and "effectiveness" to serve as a bench mark against which programs can be assessed.

Two types of standards are used for evaluation: (1) standards which have been developed by state legislatures, especially in the areas of health and safety, student contact hours or minimum days in school year, and teacher certification requirements, and (2) educational program standards which have been developed by vocational educators and administrators, especially in the areas of program support services, curriculum and instruction, student recruitment and selection procedures, course completion requirements, and student achievement.

Among the state standards which have been developed, most focus on program inputs (i.e., teachers, funds, supplies, facilities and equipment) and processes (i.e., instructional methods, student contact hours, and youth organization activities). A few SEAs (Hawaii and Kentucky),

have also developed standards for determining student competency or achievement levels. At least two SEAs (Idaho and Minnesota) have established standards of acceptability for employment rates of former students, to determine program "effectiveness".

State standards vary considerably between those which are stated qualitatively and those which have quantitative specifications. For example, quantatively expressed standards of "quality" or "effectiveness", include:

- Minnesota has set a standard for program effectiveness, indicating that at least 51 percent of all former students must be employed after program exit; less than a 51 percent employment rate is construed to mean that the program is not effective.[4]

- Wyoming has set a quality standard for distributive education teachers, specifying that each teacher must have obtained at least 2000 hours of business or office experience related to his or her area of teaching, for that teacher to be considered qualified to teach.[5]

Qualitatively stated standards, which allow evaluators some latitude in assessing program quality and effectiveness, are used, for example, in the following way:

- In evaluating the "quality" of instructional facilities, Wyoming has set the standard that "provisions are made for an adequate resource center to be maintained,with current literature available, relative to the subjects being taught"; this allows the evaluator some latitude in determining accuracy.[6]

- Ohio has set a standard for instructional staff, indicating that "child care service teachers must be sensitive to and interested in the individual development of young children and the child care service students"; again, the evaluator is responsible for determining what constitutes "sensitivity" and "interest".[7]

At least one state (California) has provided guidelines to assist evaluators in determining whether qualitatively stated standards have, in fact, been met. The California postsecondary evaluation requires evaluators to rate programs as to the extent to which they have met the established standards of performance, using a rating scale which runs from "poor" to "excellent". Examples of "poor" and "excellent" performance are given for each standard, to provide guidelines or perameters for evaluation. For instance, in rating the provision of support services to disadvantaged students, the following examples are used:

- Standard: (There will be) emphasis on occupational education counseling and guidance for the disadvantaged.

- Excellent performance: The college has a recognized occupational information program for all students. Particular emphasis is

placed on counseling and guidance of disadvantaged students including information on special programs/services.

- Poor performance: No specific responsibility has been delegated or procedure has been developed to inform the college staff and community of special programs and services for disadvantaged students.[8]

In other states with qualitative standards, the evaluation system includes suggestions for obtaining documentation of the extent to which programs are meeting standards. For example, Indiana's evaluation guidelines suggest specific documents be examined to provide evidence that a given standard is being met (i.e., enrollments, fiscal records, staff records).

Approximately 28 SEAs have not developed standards of program "quality" or "effectiveness". In these states, evaluations are made on the basis of the knowledge and expertise of the individual evaluators who must use their own judgement of program "quality" or "effectiveness". In those cases, the experience and competence of the evaluator is of major importance to the adequacy of the evaluation. For this reason, states tend to employ teams rather than single evaluators. Evaluation teams often include state administrators who have knowledge about the program's plan for operation, state supervisors or program specialists who have knowledge about given program content areas, educators who are informed about instructional techniques and materials, and representatives from business and industry who can provide expertise in the technical aspects of the program offerings. A few states, however, such as North Dakota, use a single SEA program specialist to evaluate each program area. The program specialist makes fairly frequent visits to program sites and determines, through his/her own knowledge of the program, what each program's weaknesses are and what the overall program quality is.

Although states view program standards as a useful basis for determining program "quality" and "effectiveness", at least one SEA disagrees and will not, therefore, develop standards. Specifically, Illinois staff are concerned that standards might be construed to mean minimum requirements, beyond which local or institutional practitioners would not attempt to reach. Illinois feels that standards might prove limiting and would discourage program staff from pursuing higher goals of program excellence.

4. Indicators of Program Quality and Effectiveness

While the legislation and the Regulations suggest some indicators of "quality" and "effectiveness", no attempt has been made to prescribe to states a comprehensive set of indicators. Thus, in the course of designing an evaluation system for program review, student achievement reporting, or former student follow up, SEAs have been required to identify those program elements which they consider to be the most important indicators of "effectiveness" or "quality". (See Matrix #2 for summary of "quality" and "effectiveness" topics used by states.) A few states, such as Washington, plan to use only the program elements stated in the

MATRIX 2: STATE EVALUATION TOPICS FOR 1978-79

State \ Evaluation Areas	PROGRAM REVIEW																STUDENT ACHIEVEMENT							FOLLOW UP					
	Administr.	Students	Staff	Guidance, Coun. & Placement Serv.	Special Populations	Curriculum	Instruction	Equipment	Facilities	Objectives	Planning	Evaluation	Community R.	Ad. Council Inp.	Other	Stand. Test	Other Test	Licensing & Certif.	Grades	Teacher Rating	Other	Employment rate	Job related	Wages	Stud. Satis.	Employer Satis.	Other
Alabama	•	•		•	•	•	•	•	•		•	•			•							•					
Alaska ⊙																											
Arizona		•		•	•		•				•											•				•	
Arkansas		•	•	•	•			•	•	•	•		•		•							•	•					
California △	n/i																					•				•		
Colorado △		•	•																			•						
Connecticut*	•		•	•		•		•	•			•		•	•							•	•					
Delaware		•			•	•	•								•							•						
Florida	•	•	•			•	•	•	•		•											•	•			•		
Georgia	•			•		•	•				•											•						
Hawaii △																					•	•	•					
Idaho		•	•					•						•	•													
Illinois △	•	•	•	•							•	•	•		•													
Indiana △		•	•	•		•	•	•	•		•	•			•							•				•		
Iowa	•	•		•	•	•			•						•							•						
Kansas ⊙																												
Kentucky ⊙															•					•		•	•		•	•		
Louisiana			•	•		•		•	•																			
Maine	•	•				•	•	•	•	•		•		•								•	•	•	•	•		
Maryland △		•	•	•	•	•	•	•	•	•	•		•								•							
Massachusetts	•	•	•	•	•	•	•	•	•	•		•	•	•								•	•					
Michigan ⊙ **	•														•					•		•	•		•	•		
Minnesota		•																										
Mississippi	•	•	•			•							•															
Missouri */**	•	•		•	•	•									•							•						

KEY:
- △ detailed Information not available
- ⊙ planning stages. Some information requirements not determined
- * postsecondary
- ** secondary only
- ⧄ states with separate secondary and postsecondary education agencies

MATRIX #2: STATE EVALUATION TOPICS FOR 1978-79

State \ Evaluation Areas	PROGRAM REVIEW																STUDENT ACHIEVEMENT						FOLLOW UP					
	Administr.	Students	Staff	Guidance, Coun. & Placement Serv.	Special Populations	Curriculum	Instruction	Equipment	Facilities	Objectives	Planning	Evaluation	Community R.	Ad. Council Inp.	Other	Stand. Test	Other Test	Licensing & Certif.	Grades	Teacher Rating	Other	Employment rate	Job related	Wages	Stud. Satis.	Employer Satis.	Other
Montana		•	•		•	•		•	•		•			•	•								•					
Nebraska		•			•	•				•				•	•								•	•			•	
Nevada		•		•		•	•					•											•	•				
New Hampshire ⊙		•	•																									
New Jersey ⊙		•	•	•	•			•	•														•					
New Mexico		•	•		•	•		•	•														•	•				
New York */**	/	•	/	/		/		/	/														•	•				
North Carolina /**	•	•	•	•	•	•		•	•	•			•	•	•	•					•		•	•			•	
North Dakota		•		•	•	•		•	•														•	•	•			
Ohio		•	•		•	•	•	•	•						•								•	•				
Oklahoma		•	•		•			•	•													•	•	•		•		
Oregon		•	•	•			•	•	•		•												•	•				
Pennsylvania	•	•	•	•		•		•	•			•	•										•	•			•	
Rhode Island Δ		•	•					•	•			•	•															
South Carolina Δ		•	•															•										
South Dakota ⊙															•								•				•	
Tennessee Δ	•				•		•							•								•	•					
Texas		•			•	•	•	•	•					•				•				•	•		•			•
Utah	•			•	•		•															•	•					
Vermont Δ				•											•							•	•					
Virginia Δ		•																•										
Washington */**	/	/	/	/	/		/	/	/	/	/				/	/						/	•	•	•	•		
West Virginia		•	•			•	•	•	•							•							•	•	•			
Wisconsin		•	•	•	•	•							•	•									•	•		•		•
Wyoming	•		•				•						•	•									•	•				

Regulations as a guideline for evaluation topics to be covered (i.e., teacher/pupil ratio, teacher qualifications, guidance, counseling, placement and follow up services). Most SEAs, however, focus on other aspects of program operations, in addition to those suggested in the Regulations. Based on an examination of 43 states' evaluation materials,[9] which have identified topics to be covered in evaluation next year, the most frequently collected categories of information are those relating to program planning and operational processes and to student employment:

- student information
- staff information
- curriculum and instruction
- guidance, counseling and placement services
- facilities and equipment
- planning and evaluation activities
- community resources and community needs
- local input from advisory boards
- student achievement information
- student follow up survey information

The following section will describe the types of information within these broad categories:

a. Student Information

Nearly all states which have conducted evaluations collect some data on students. The most frequently cited student data are "program assignment" (i.e., number of students enrolled in each program).

Information on special needs students is a relatively recent requirement for states. At least 21 states reported the capacity to collect some information on special population characteristics of students. The most frequently cited were handicapping conditions, as also specified under the recent law PL 94-142, and sex. A number of states, however, were not sure about the extent to which they could report minority status, since a mid-1960's edict had ended this practice and SEAs have apparently yet to reinstate it; most of the states in this category were located in the mid-west and the south. Other states reported that information on "disadvantagement" was very difficult to obtain, since students often had little or inaccurate information about their respective families' financial status. This was particularly true in areas where the U.S.D.A. lunch program is not widely used and thus, individual family financial data are not

collected. Many states reported that they could not report on individuals' bilingual status, although they could identify which programs were bilingual.

A number of states indicated some concern to improve data collection in the area of special population characteristics, since it is now required by PL 94-482 and PL 94-142. This information is also necessary for purposes of allocating federal funds within a given state. The concern was both in terms of the need to collect all the information required by law on special populations and the need to make such data more readily accessible for reporting and evaluation purposes. For example, Kansas does not currently collect information on "minority status" or "race", but plans to include this information in the revised student data collection forms next year. North Carolina collects most special population data; however, these data are not included on the central student files and are aggregated by district at the present time. North Carolina state officals report that the use of the information in its present form is limited, since it is incompatible with other student data.

A few states, such as Ohio, North Carolina, and West Virginia also obtain information on student achievement in the form of testing scores. The states of Ohio and North Carolina have had this capability for several years, each year expanding on the number of program areas included in the testing program. West Virginia, however, will carry out its first full scale testing program in 1978-79.

The reporting format of student data determined locally, varies widely and often impinges on the states' ability to store and retrieve information and on the ways in which that information can be used for analysis. For example, states with ADP systems such as Colorado and North Carolina, maintain individual records for each student with detailed information on the courses each student has been enrolled in, student characteristics and, in North Carolina, achievement scores.

States, without ADP facilities, collect data that are aggregated at the school level by program, such as: number of males in the program, number of females, number of handicapped, number of disadvantaged. Data that are initially aggregated at the school level are, of course, less flexible than data organized by individual student records. For example, when data are broadly aggregated (at the school level) it is not possible to determine, using the above example, how many Hispanic, disadvantaged females are enrolled in a certain program. One could determine, however, the total number of Hispanics, the total number of disadvantaged, and the total number of females enrolled in the program.

b. Staff Information

As with student data, states vary in the amount and the format of data they collect on staff. Most of the states can report "staff assignment" (i.e., program area taught) for each instructional staff member. Some states, such as Michigan, also collect information on teacher qualifications. For example, Michigan obtains information on teacher competency

levels, as determined by a competency based in-service training course that teachers are encouraged to complete. North Carolina collects information on teachers' in-service training, work experience, and achievement of former students.

Staff information is maintained, in a few cases (Maryland and North Carolina), on individualized automated file records. Often data are available from state offices of teacher certification in non-automated files. This information, however, cannot be accessed on a routine basis for evaluation purposes, since it is difficult to access and unwieldly for analysis.

c. Guidance, Counseling, Placement and Follow Up Services

Information on guidance, counseling, placement and follow up services is included in approximately 22 state evaluation systems. (See Matrix #2.) Some states, such as Maryland, North Carolina, and Oregon, will collect detailed information on counseling staff and types of services provided, while other states, such as Idaho and Louisiana, only ascertain whether such services are available. Many states have included evaluation of these services only in their most recent version of evaluation materials and procedures, since the new legislation explicitly refers to the provision of these services as an indicator of program quality.

d. Curriculum and Instruction

Information on curriculum and instruction are included in approximately 30 SEA evaluations. Evaluation questions are frequently designed to determine whether instructors have been involved in planning, goal setting, and coordination of courses in the areas for which they are responsible. Some states, such as Oklahoma, Ohio, and Pennsylvania, also require evaluators to report on the appropriateness and up-to-dateness of curriculum.

e. Facilities and Equipment

One of the most frequently included evaluation topics is facilities and equipment. This is possibly due to the need in many states to collect detailed information (i.e., counts of machines and tools, square footage and number of work stations) for budget justifications provided to state legislatures and for determining compliance with safety and health standards. A few states, such as Wyoming, have gone beyond a simple accounting of equipment and facilities to include aspects such as the modernity of equipment, relative to that which is used in business and industry.

f. Planning and Evaluation

At least 13 states also assess district or institutional planning and evaluation activities. This information is most frequently obtained in states which require districts or postsecondary institutions to carry out major planning and evaluation activities (i.e., planning usually refers to the district's or institution's one and five year plan development;

evaluation often refers to the school's or district's self-study and conduct of follow up surveys of former students). Evaluation questions are often designed to determine whether planning and evaluation activites have been carried out, what procedures were used to accomplish them, and how the information was used by the district or postsecondary institution. Much of the information collected by evaluators is based on interviews with local staff, as in Illinois, Arizona and Indiana.

g. Community Resources and Community Needs

At least eight SEAs collect information on community resources or community needs in the course of a program review. Items of consideration are the extent to which opportunities for cooperative programs are implemented in local businesses and industry, the extent to which business and industry depend on the program for trained workers, the extent to which business and industry representatives have input into program content, and the extent to which programs can be expected to attract new students in the future.

h. Follow Up Information

The collection of follow up information has been expanded in the 1976 Amendments to include student employment success data as well as employer satisfaction data. These requirements necessitated many states to collect additional information on student post-program employment and develop an employer survey.

At least 37 states collect follow up information from former students or have access to information collected by LEAs and postsecondary institutions. Of these, virtually all collect employment information from former students. Five more SEAs are planning to initiate follow up surveys in 1978/79. Although rquired by law, only 20 SEAs collect information on the extent to which former student's employment is in the area related to training. A few states, such as Georgia, Kentucky, and North Carolina, collect longitudinal data (i.e., former students are contacted on several occasions over time) on former students' post-program experiences, to determine duration of jobs and career patterns.

At the present time only 12 SEAs collect data on employer satisfaction, although an additional 12 plan to survey employers in the coming year. While cognizant of the mandate to collect information on employer's satisfaction with vocational students' on-the-job performance, 21 states have encountered difficulties in establishing procedures for a survey of employers. These difficulties are related to privacy concerns stemming from the need to link former students and employers, to identify former students in employer satisfaction questionnaires as well as from the difficulties of idenfitying an appropriate sample of employers. For instance, Ohio is concerned that the collection and maintenance of judgemental or evaluative information on individual students may violate former students' right to privacy. At the present time, state officials in Ohio are exploring ways to code this information so that employers' evaluations cannot be

traced to individual students. Similarly, Idaho and Oregon have found that without the explicit identification of former vocational students, employers cannot distinguish between employees who received vocational training and those who did not. States experiencing such problems have indicated that they intend to conduct employer surveys when they have worked out the details of identifying and contacting employers. A number of states have reported that they regard "employment of former students" as the most critical indicator of program effectiveness. Other SEAs have reported they use a more precise definition of "effectiveness", i.e., "employment of former students in areas related to their program training".

i. Student Achievement or Competency Information

Only a few SEAs are currently using student achievement as an indicator of program effectiveness, partly because of the lack of available procedures for determining in a consistent fashion what achievement levels are. Approximately eleven SEAs have developed various mechanisms to obtain information on student achievement or competency levels. For example:

- Kentucky requires teachers to rate students, using state developed competency standards.
- Michigan's curriculum is organized to coincide with state competency performance objectives; teachers are required to determine the extent to which students have met the competency performance objectives in their area of major concentration.
- Nevada uses criterion referenced tests to determine student achievement.
- Utah determines student competency levels by examining the number of students who pass occupational certification or licensing tests or those who have been awarded a degree in the various occupational areas offered.
- Ohio, North Carolina, and West Virginia have established statewide standardized testing programs. In each case, student achievement is determined by test scores.
- Oregon requires districts to report on student achievement, but has left the mechanism for determining achievement to the discretion of the individual LEAs.

Although these data are required by law, the student achievement evaluation component remains the least developed.

D. Evaluation Procedures

Procedures for the evaluation of vocational education program "quality" and "effectiveness" can be divided into three major categories

as indicated in the Regulations: program review (i.e., planning and operational processes), student achievement of competencies at exit of program, and student employment success. (See Matrix #3.)

1. Program Review Procedures

Program review procedures are the most fully developed evaluation procedures in vocational education. The majority of states conducted program evaluations also before the 1976 Amendments. States use several procedures for reviewing program planning and operational processes:

- self-study;
- on-site visit by an outside, state agency selected, team;
- verification or feedback mechanism in the form of a follow up state agency visit or required documentation that recommendations for program improvement have been implemented.

Only three states rely either on the method of self-study or on the on-site team visit procedure as the single method for evaluating program quality. In most states the combination of self-study and on-site team visit is used or is being planned. In a growing number of states (approximately 20) the verification or feedback mechanism is also utilized.

a. Self-Study

Procedures involving the conduct of self-study vary across states in terms of the purposes of program review, the number of programs being assessed, frequency of assessment, the actors, instrumentation, data collection procedures, and use of self-study findings. Purposes of program self-study may be stated or designed in terms of goal attainment, whether program objectives have been met, or whether programs comply with the quality standards specified by the state, institution, district or program. In several states, like New Mexico and New York, program self-study is conducted for recertification, funding or to meet the institution or district's needs for information.

In approximately ten states program self-study is conducted by all programs on an annual basis, thus making information for program improvement available regularly. In the majority of states where self-study procedures are used as a preparatory stage for the on-site team visit, each year only those programs due for on-site visits will assess themselves. In those states programs will conduct self-studies mostly once in five years. In a few states, like North Carolina, only those programs or institutions which have been identified as weak will be required to conduct a self-study. In states where self-study is not required on an annual basis, programs may implement self assessment during years when they are not subject to on-site team visits (i.e., Minnesota), on a five year cycle as preparation for an on-site visit, or as part of the recertification review (i.e., Iowa and New Mexico).

MATRIX #3: STATE EVALUATION PROCEDURES

Evaluation Procedures / States	PROGRAM REVIEW						STUDENT ACHIEVEMENT						FOLLOW UP SURVEYS: STUDENT			FOLLOW UP SURVEYS: EMPLOYER				EDUCATIONAL LEVELS ADDRESSED		
	Self Study	On Site	Other	SEA Technical Assist. Avail.	Follow up monit. for implem. of recommendations	Frequency of on-site eval.	Standardized Testing	Other Testing	State Standards of Competency	Licensing & Certification Tests	Independent Teacher Rating	Other	Teacher, School or District Contact	SEA Contact	Frequency	Teacher, School or District Contact	SEA Contact	On-Site Team Contact	Frequency	Secondary	Post Secondary	Adult
Alabama		X		X		5 yr.							n/i		1x				1x	X		X
Alaska					X																	
Arizona	X	X		X	X	5 yr.							X			P				X	X	X
Arkansas			X		X								n/i							X	X	X
California	X	X												X		X				X	X	
Colorado	X	X			X	5 yr.							X			n/i				n/i		
Connecticut	X	X			X	5 yr.		X		X			X		3x				1x	X	X	X
Delaware	X	X											P			P						
Florida	X	X				5 yr.							X		1x	X			1x	X	X	
Georgia	X	X				5 yr.								X			X		5 yr			
Hawaii		X							X					X			P			X	X	
Idaho	X	X										X	X		1x				1x			
Illinois		X				5 yr.							X		1x	X			1x	X	X	X
Indiana	X	X		X									n/i									
Iowa P													X		1x	P						
Kansas P																						
Kentucky P									X				X		2x	X			1x	X	X	
Louisiana			X			as req.							X									
Maine	X	X			X	Period.							P				P				X	
Maryland	X	X				5 yr.						X		X	1x		P			X	X	
Massachusetts	X	X		X	X	5 yr.							X		n/i					X		
Michigan P									X					X						X	X	
Minnesota	X	X		X		5 yr.								X	1x		X		1x	X	X	X
Mississippi	X	X		X	X	5 yr.							X		1x	X						
Missouri	X	X			X								X		1x					X	X	X

KEY:
P = planning stages
5 yr. = each program contacted every 5 years
Ax = former students contacted annually more than 3 times
n/i = no information
X = system to be implemented 1978-79
1x = former students or employers contacted one time only
2x = former students contacted twice
3x = former students contacted three times

MATRIX #3: STATE EVALUATION PROCEDURES

Evaluation Procedures / States	PROGRAM REVIEW						STUDENT ACHIEVEMENT						FOLLOW UP SURVEYS							EDUCATIONAL LEVELS ADDRESSED		
													STUDENT			EMPLOYER						
	Self Study	On Site	Other	SEA Technical Assist. Avail.	Follow up monit. for implem. of recommendations	Frequency of on-site eval.	Standardized Testing	Other Testing	State Standards of Competency	Licensing & Certification Tests	Independent Teacher Rating	Other	Teacher, School or District Contact	SEA Contact	Frequency	Teacher, School or District Contact	SEA Contact	On-Site Team Contact	Frequency	Secondary	Post Secondary	Adult
Montana	X	X	X		X								P				P			X	X	X
Nebraska	P	P											n/i									
Nevada		X						X					X							X	X	
New Hampshire P						3-4 yrs.			X			X		P			P			X	X	
New Jersey P	X	X		X		Uncert		X						P			P			X	X	X
New Mexico	X	X			X	6 yr.														X	X	
New York	p.s.	sec.											sec.			sec.				X	X	
North Carolina	X	X		X		5 yr.	X							X	3x		X		1x	X	X	
North Dakota		X	X	X		3 yr.							X		1x	P				X	X	
Ohio	X	X		X		5 yr.	X						X		1x	P				X	X	
Oklahoma	X	X											X		1x					X	X	
Oregon	X											X	X		1x	X				X	X	
Pennsylvania	X	X			X	5 yr.							p.sec		1x					X	X	
Rhode Island		X				2 ea. yr.							X		1x					X		
South Carolina		X				5 yr.							n/i							X		X
South Dakota P													P									
Tennessee	X	X				Ann.							X							X	X	
Texas	X	X				5 yr.							p.sec	sec.	1x					X	X	
Utah	X	X								X			X		1x					X	X	
Vermont	X	X	X		X								X		2x	X			1x			
Virginia	X					5 yr.							X								X	
Washington	X	X											X		1x					X	X	
West Virginia	X	X			X	5 yr.	X						X			X				X	X	
Wisconsin	X	X				5 yr.							X		3x					X	X	X
Wyoming	X	X				5 yr.								X			P			X	X	

KEY: P = planning stages
5 yr. = each program contacted every 5 years
Ax = former students contacted annually more than 3 times
n/i = no information
X = system to be implemented 1978-79
1x = former students or employers contacted one time only
2x = former students contacted twice
3x = former students contacted three times

To improve the quality of locally conducted evaluations and generate information which can be aggregated across institutions, states imposed various evaluation requirements. In approximately 70 percent of the states, the self-study instruments have been designed by the state agency/agencies dealing with vocational education programs. In many cases the instruments used for self-study are identical to those used by the on-site team. To further assure the comparability of data collected during the self-study with data collected by the on-site team, several states, like Oklahoma and Iowa, provide, in addition to instruments, also data collection and evaluation guidelines or specify procedures for conducting program self-study. To improve the quality of self-study procedures, states like Oregon and Wisconsin require each district or institution to develop an evaluation plan on the basis of state guidelines and submit the plan to the state agency for review and approval. In most states, however, data collection and evaluation procedures are determined by the district or institution although state designed instruments are used. Only in a few cases (i.e., Oregon, Wisconsin), are state-designed instruments optional; programs may choose to use self designed instruments if approved by the state agency.

Instruments used for program self-study are usually in a checklist or rating format. Self-study instruments require also the collection of statistical data on the program, district/institution or community, or the provision of documented evidence to supplement or justify responses. Self-study instruments may range from a one-page checklist to a questionnaire requiring detailed data on a large number of variables.

Program self-study is usually conducted by instructional and administrative personnel who complete the self-study instruments. Members of local advisory councils or craft committess may be involved in the process. The staff assigned to complete self-study instruments may include all instructional and key administrative personnel or may be selected by the superintendent as appropriate. In states like Maine, Ohio, West Virginia and Nevada, where the self-study phase is more formally structured, a local team composed of program instructional staff, administrative personnel, current and former students, local business and industry people, and members of the local advisory councils is selected. The self-study procedures may also be conducted in several phases: for instance, program self-assessment, in Virginia, is conducted by program teachers who complete program review instruments. The completed instruments then serve as a basis for several committees' reviews, including the departmental evaluation committee, school evaluation committee, and the Division of Vocational Education committee.

Data collected during the self-study phase are sent to the state agency either in its raw form--completed instruments--or is summarized in a report which includes recommendations for program improvement. Only in a few states like Minnesota and New York (postsecondary), where program self-assessment is conducted informally, findings may be reported to the state agency for review on a voluntary, not obligatory, basis.

b. On-Site Team Visit

In addition to program self-study, most states also use the on-site team visit for a variety of purposes ranging from:

- Legal or administrative compliance review conducted to assure the proper administration of grants or in response to serious financial or legal discrepancies;
- Verification of self-study findings;
- Review of self-study data jointly with district or institutional personnel;
- Audit for recertification purposes;
- Requests from schools/institutions for state visit to supply information on particular concerns or provide technical assistance in solving problems;
- Review of districts, institutions or programs which have been identified in the self-study as having problems or significant weaknesses;
- Collection of more in-depth information to expand on statistical profiles and self-study findings;
- In-depth program evaluation/discontinuance to assess viability of program.

Site visits are conducted at different frequencies across states. The frequency of the visits depends on their purposes. In states which conduct on-site visits for purposes of auditing or certifying self-study results, programs are visited once in five years. States which conduct site visits for monitoring or supervisory reasons may do so as frequently as twice a year or once every two or three years. In New Mexico, for instance, comprehensive program reviews are conducted by site visits once in six years; in Iowa postsecondary programs are visited once in ten years,[12] while in Maine site visits will be conducted during the first and tenth year. However, state agencies which conduct visits in response to requests from districts or institutions may visit programs as frequently as once a year.

Information on how programs, LEAs or institutions are sampled for regular on-site visits is not described in state evaluation documents, nor had it been specified by state personnel during the personal and telephone interviews. In general, however, states establish a visitation schedule so that all programs are visited within a certain time schedule. This schedule may be changed annually with changing state needs for information or may remain unaltered.

The visit is conducted in most cases by a team selected directly by the state agency or, in some states, by the team leader. The composition and size of the team vary greatly from state to state. In some states, the visiting team includes state agency staff, SACVE staff, administrators, teachers, former students, and business and industry pecple from outside the district which is being evaluated. In a number of states the team is composed solely of state staff or of representatives of SACVE. Other states will select teams composed of teachers, the director of the programs under evaluation, district supervisor and state agency staff; the state agency member who originally approved the program may chair the team. In states where the state agency staff do not participate in on-site visits, the team includes program specialists and evaluation experts in addition to business and industry personnel.

Several states such as Maine, Montana, and Washington have coordinated their evaluation activities with those of the regional accreditation associations to maximize the efforts of the small SEA staffs. Site visits in these states are conducted by a large team ranging from 15 to 20 members--who are divided during the visit to three member teams--to teams of 30 to 55 members. On-site visit teams usually include between five and ten people.

In preparation for the on-site visit, the team reviews the self-study data or report and the supplemental documents. Only in Utah the selected team conducts, prior to the visit, a mail survey of students, staff, employers, and community representatives, using the collected data as a basis for the on-site evaluation.

In states where self-studies are conducted in preparation for the on-site visit, the visiting team collects data on the same topics and uses the same instruments used during the self-study phase, assessing availability of support services, adequacy of the local planning effort, and quality and effectiveness of programs. The state agency may provide, as in Georgia, evaluation guidelines and leave the choice of data collection and evaluation procedures to the discretion of the team leaders.

To assure the proper conduct of the on-site visit, several states like Illinois and Missouri provide their team leaders with in-service training. The team leaders, in turn, orient their team members, usually in the evening before the on-site visit, in the procedures of data collection, evaluation, and report preparation. Team members are also provided, in advance, with background information on the district, institution, and programs, with the annual and five year plan, and with the data obtained in the self-study.

The on-site visit usually takes between two and four days. The duration of the visit varies across states from a single afternoon or a day to two weeks, depending on the purpose of the visit and on the number of schools in the district. Data are collected during the visit through interviews with administrators, instructional staff, students, members of local advisory councils or craft committees, and in a few states also

with employers in the community. In addition, team members observe facilities, equipment, and instructional methods or review documents.

The team's evaluation report is usually prepared, during the last day of the visit, and discussed in an exit interview with key staff members of the district or institution under evaluation. Approximately 10 states indicated that the report is prepared by the team chairperson following the on-site visit. The evaluation report summarizes the visit findings, emphasizes discrepancies between self-study findings and on-site team findings, highlights program strengths and weaknesses, and presents a set of recommendations for program improvement. The report is either submitted to the district superintendent, district administrator or to the local program supervisor as well as to the State Director. In some states, however, like South Carolina, the report is forwarded to the state agency which reviews it and makes formal recommendations for program improvement.

In Maryland and New Jersey, an additional phase of program review has been incorporated in their newly designed systems. This phase is undertaken only when self-study and on-site team visit procedures indicate problems or discrepancies. Maryland will use a third party evaluation if disparities are found between the on-site and self-study results. New Jersey may undertake a re-evaluation site visit using a larger on-site visitation team if site visit results are unsatisfactory or indicate major problems.

c. Verification/Feedback Mechanisms

Recognizing the need to monitor the implementation of program improvement recommendations, approximately 30 percent of the states have developed verification or feedback mechanisms. These mechanisms have taken the format of a follow-up visit or of the allocation of a predetermined period in which the school or institution must carry out the recommendations and document program improvement.

Specifically, the functions of the follow up visit, conducted usually one year after the team's on-site visit by one or two members of the state agency are to audit the implementation of recommended changes, to conduct conferences to assist programs with compliance deficiencies, to provide technical assistance in implementing improvement recommendations or to manage in-service training workshops in evaluation techniques.

Several states like Illinois, Maine, and Nevada, require documented evidence of program improvement. The documentation required includes the development of plans for implementing recommendations, incorporation of implementation strategies in the school/institution's annual and five year plans, or the demonstration of program improvement in the funding application.

Schools/institutions with compliance deficiencies or with programs requiring major improvement are given, in New Mexico, a period of two weeks

in which to correct deficiencies; in Missouri, Pennsylvania and South Carolina, a period of 30 to 60 days is allocated. The deficient school/institution must then respond in writing within the specified period with an implementation plan or actually carry out the required changes. At the end of the predetermined period an audit visit is conducted to verify the implementation of the improvement recommendations.

2. Assessment of Student Achievement of Competencies

The assessment of student achievement of competencies at program exit is presented in the Regulations as a measure of program effectiveness. Procedures for the measurement of student achievement constitute the least developed component of state evaluation systems. Only one-fifth of the states currently have procedures for the assessment of student achievement; those procedures are mostly in developmental or pilot-testing stages. Other states are awaiting the establishment of such procedures by states which plan to develop a student achievement component.

The measurement of student achievement is handled in different ways across these states. While in one case, the state has mandated the use of competency tests in all school systems and required schools to organize their curricula into competency based modules; other states allow the selection of specific measures to the discretion of the teacher. Those states with planned or operational procedures tend, in general, to utilize licensing and certification tests, the V-TECS system or degrees as evidence of student achievement. One state, however, is in the process of developing a statewide achievement testing program for secondary school students. Tests are being developed for vocational areas to determine whether programs are effectively teaching students the skills required.

In most of these states, student achievement scores are computed at the local/institutional level by teachers and reported directly to the state, or first to the district, which in turn, will report to the state agency. Student achievement may be reported either on a student record basis, in form of a summary report, or as part of the educational accountability section of the program review format. The student achievement score is, in some states, the score achieved in the test administered to the student before program exit. In other states, the score reported to the state is a composite score based on student achivement scores obtained throughout and at exit of program, in addition to teacher's assessment of student's work readiness.

3. Student Employment Success

Student employment success serves as a major criteria for assessing program effectiveness. Program effectiveness is determined on the bases of a number of variables specified in the law and subsequent Regulations: student's ability to find employment, whether student is employed in a job related to his/her training, job performance, job advancement (i.e., employer satisfaction), student's work preparedness, student's perception of program usefulness, and how former students with vocational education compare with employees who did not have vocational education.

The conduct of systematic and quality employment success and employer satisfaction surveys require survey and data processing capabilities which most state agencies and particularly local institutions do not have. These activities are also costly and time consuming. Data on student employment success had therefore been collected by a small number of states before the 1976 Amendments. In most cases these data were collected on a local, informal basis initiated and conducted unsystematically by teachers. Employer satisfaction data were not collected previously.

Approximately 37 of the states currently have operational systems which collect student post-program employment data. However, only 25 percent of the states reported that they conduct employer surveys although so required by law. Among those states with operational systems, only a few utilize procedures which provide quality data of use to the state agency. A considerable effort has therefore been undertaken by approximately 15 states, including states with operatonal systems, to broaden the scope of data collected, to include employers as well as completers and leavers in the survey, to obtain responses from a large number of surveyed students and employers, and to conduct employment success surveys in multiple intervals (more than once), in order to increase reliability and generalizability of data.

Approximately 20 states with established procedures reported that student employment success surveys are conducted at the district or institutional level. To assure comparability of data, the survey instruments, and in a few states, also the data collection and analysis procedures are provided by the state agency. Placing the responsibility for obtaining post-program employment data on the district or institution personnel stems from reasons such as the state agency's inability to allocate personnel for conducting a statewide mail survey, unavailability of automated data processing capabilities or the success of teachers relative to other actors in obtaining high response rates from former students.

In those states where post-program employment surveys are conducted at the local or institutional level, teachers or guidance and placement personnel undertake the task of contacting students. While placement or guidance personnel follow all students who exited the programs in a single institution, teachers are responsible for the follow up of their own former students. Follow-up activities range from obtaining pre-exit information from students--mostly in terms of address, identification of next-of-kin and career plans--to tracking, contacting and obtaining responses. In states where former students are or plan to be contacted more than once, teachers are also required to maintain and update their former students' files.

Approximately 10 percent of the states have developed procedures to conduct statewide post-program employment surveys. These states either have an automated management information system (MIS), or have contracted out this task either to state universities or to private firms. For instance, in Minnesota former students of postsecondary institutions and their employers are surveyed by a private firm; secondary students are

followed up by the University of Minnesota. In Oklahoma, on the other hand, teachers track and contact their former students and report findings to Oklahoma State University which coordinates survey activities and analyzes the data. In Utah, both the district and the state are involved in the survey of former students and employers: districts are required by the state to survey all former students; the state, however, conducts independently of the districts, a survey of a random sample of former students and the SACVE conducts the employer's survey.

In Oregon, the use of state designed survey instruments is voluntary and schools/institutions may use their own instruments and procedures if approved by the state agency. In New York, survey procedures vary across districts, depending on the districts' interest and data processing capabilities.

Follow up data obtained by states through a statewide survey implemented by SEA staff, consulting firms or universities rather than by local LEA or institutional staff are usually of better quality and can be generalized, due to the more systematic procedures employed.

To determine program effectiveness, the 1976 Education Amendments require that data be obtained by statistically valid means from former students and employers. More than 20 of the states with post-program employment survey procedures follow all former students: completers and leavers or only completers and "leavers with skills". States with large student populations survey samples of students selected on a random or stratified (by district) basis or follow up only completers. North Carolina, for instance, will select a random sample of 50 percent of completers and leavers for the initial survey, but will use only subsamples of the 50 percent sample for the three and five year follow up surveys.

The conduct of employer surveys poses several difficulties. The number of employers surveyed depends on the number of former students who respond to the post-program employment survey and who are willing to identify and permit the collection of data from their employers. Obtaining a high response rate from former students is essential for obtaining a "representative sample" of employers, since in states with current or planned employer surveys employers are identified through surveyed students. To decrease costs of the employer survey Minnesota surveys only employers of students employed in training-related jobs and Kentucky follows employers of students employed more than one year. Other states, like Mississippi, substitute the employer survey with an on-site team visit by having team members interview local business people about competencies of students with vocational education training or, as in Washington, obtain data on employer satisfaction from reports of advisory committee members representing different occupational areas.

The linking of former students and employers for purposes of identifying employers and obtaining data on employers' satisfaction with and rating of vocationally trained students, created serious issues of privacy

and confidentiality as indicated earlier. Ohio is in the process of developing a system that will protect students. Vermont eliminated the linkage of students and employers by providing surveyed employers with a list of former students in their employee and asking them to rate these students as a group rather than individually. Mississippi requests employers in the community to rate students with vocational education training in general without identifying any particular employee. The latter strategy, however, has caused inaccuracies in employer data since employers were unable to distinguish vocationally trained employees from employees without vocational education training.

The increased recognition on the part of states that surveying former students only once does not provide sufficient data for assessing program effectiveness particularly if the survey is conducted a short time after program exit, has led approximately 12 states to develop procedures for surveying former students and employers more than once. While some states conduct or plan to conduct post-program employment surveys, six, nine or twelve months after student exited program, the tendency among other states is to conduct one, three and five year surveys. A few states adopted different survey intervals for different types of students. For instance, Georgia, which will carry out its new system in 1978/79, will survey technical school students every three months for a five year period, other students will be contacted annually for five years. In Texas, former secondary students under the revised system are surveyed once a year for five years while former postsecondary students are surveyed in the first and third year after program exit. Kentucky plans to contact former students in the first and second year after exiting programs; their employers, however, will be surveyed one year after student obtained employment.

Surveying former students more than once will allow states to create a longitudinal data base. Creating a longitudinal data base was attempted in Minnesota by following former postsecondary students on a one, three and five year intervals. This attempt was abandoned due to high costs. Such a data base was created on a limited basis in Hawaii. The Hawaii "Student Flow Project" followed the entering community colleges class of 1975 both throughout the program and after exit collecting data on completers and leavers.

The data obtained in the post-program employment surveys are analyzed and summarized either by institutional or district personnel, by state staff or by contracted firms or universities. These data are then used by the state agency, by local or institutional staff or by the state legislator to determine program effectiveness. In Idaho, program effectiveness is assessed on the basis of standards of acceptability for employment rates in each occupational area set by the state legislature. In Oklahoma, survey data are transformed into a product index figure. The product index figure which is computed on the basis of employment rates, job relatedness, educational status and job retention rates, is used to rank programs relatively to other programs. Programs ranked in the lowest 25 percent are contacted by the state for determining source of weakness and whether technical assistance is necessary. Nevada uses rates of employment in training-related fields as the chief indicator of

program effectiveness while several other states have set predetermined employment rates for each program area. Programs with lower than "required" employment rates are given a probationary period for improving student placements. Programs unable to meet the placement rate required are then eliminated.

E. Problems in Evaluation

In the course of reporting on evaluation activities, many administrators have identified difficulties which have been experienced, either in implementing evaluations or in planning them for the coming year. It should be noted, however, that the extensiveness of some problems is not known, since some state administrators appear to be reluctant to discuss their state's outstanding problems in evaluation with individuals outside the SEA.

Virtually all the problems which were reported relate to the administrative aspects of conducting evaluation, not to methodological difficulties.[13] States' overwhelming concern with administrative problems would appear to arise from SEAs widespread need to gear up for evaluation rapidly, in order to be in compliance with the new mandate in 1978-1979. Indeed, for those states which had not conducted systematic or comprehensive evaluations prior to the 1976 law, the effort has required considerable reorientation of available staff and budget allocations which were already tight before the requirement to evaluate.

The impact of problems identified by states ranges from decreased ability to use evaluation findings for planning and program improvement to threatening the entire plan to evaluate. These problems are:

- Insufficient staff and funds to conduct or monitor evaluations prescribed by the legislation.
- Insufficient staff, who are trained in evaluation and data analysis, to design evaluation procedures and make optimal use of evaluation findings, once they are obtained.
- Lack or insufficient access to ADP facilities to handle, store, and retrieve information in a timely fashion.
- Lack of clarity about the intent of the law: what information should be included in the evaluation to comply with the new mandate.
- Inaccuracy in reporting, resulting in an incorrect assessment of program operations.

The following section will examine these problems and their potential impact on compliance with the mandate.

1. Insufficient Staff and Funds for Evaluation

The most frequently reported difficulty facing the need to comply with the law was that of insufficient staff for developing or implementing evaluation procedures. At least four SEAs (South Dakota, Oregon, Montana, and Idaho) have reported that their respective staffs are so small that even the day-to-day administration of programs is difficult. The requirement to develop evaluation systems this year and, subsequently, the need to implement them in the coming year, has placed a heavy burden on the few individuals that are available to accomplish the work. In short, the Federal government has increased the requirements for states to evaluate, through the enactment of the 1976 legislation, but neither the Federal government, nor, in many cases, the states have provided additional funds, staff, or technical assistance to SEAs to carry out their new charge.

2. Lack of Staff Trained in Evaluation and Data Analysis

Several states have reported that, while existing staff are highly capable administrators, they have not been trained in evaluation or data analysis. The result is that the development of an evaluation system and the analysis of evaluation findings is made very difficult. This problem, although sometimes allied with overall insufficient staff, appears to stem from a lack of additional funding or state job openings for hiring persons who are experts in these areas. In at least two instances (Connecticut and Michigan), administrators reported that the lack of technical expertise of the SEA staff is not a new problem; the new mandate merely exacerbates a situation in which a great deal of program data are collected each year; however, these data are not thoroughly analyzed or used for program planning or program improvement.

3. Inadequate Access to Automated Data Processing Facilities

Although the notion of automated data processing is gaining greater and greater acceptance each year as a mechanism for storing and retrieving large quantities of data, some SEAs, such as South Dakota, still do not have access to ADP facilities; others, such as Kansas, must share centrally operated ADP facilities with other departments within the state and thus, do not have access to the system when special needs arise. For example, during the period when state employees payroll checks are being prepared, state computer facilities are often unavailable to all other users, regardless of special needs for information at that time. This problem is compounded when the SEA's needs for computer use is given a low priority, relative to the needs of other departments, such as in Kansas and Nebraska. In these cases, SEA storage and retrieval functions may be delayed weeks or even months.

In states without ADP facilities, such as North Dakota and South Dakota, evaluation information must be recorded on written forms and, to facilitate handling, is often aggregated initially at the school or district level. The result of this is that data are less flexibly formatted than the SEAs desire and errors in reporting are difficult to check.

In states with limited access to ADP facilities, administrators report difficulty in retrieving information for analysis and reporting. This problem is often compounded by a lack of programming staff to code data, enter it into the system, and retrieve it in a format that is desired by evaluators or state administrators.

4. Lack of Clarity About the Intent of the New Law

A number of SEAs have reported that they do not understand the requirements of the new legislation in terms of the areas to be included in the evaluation and the uses that are to be made of the findings by the Federal government. The effects of this lack of clarity are two-fold:

- Some states reported that they are not sure what items the Congress wants to see included in the statewide evaluations and, therefore, what items should be included in the SEA evaluation design (i.e., Louisiana).

- Some SEAs are reticent to report evaluation findings, especially those involving student achievement findings, since they do not wish to be compared, possibly unfavorably, with other states' programs.

States, like Idaho, feel that the incentive to evaluate, as mandated, would be increased if the purpose of the law and the ensuing Regulations were more clearly spelled out by the Federal government. At present, these states feel that they are attempting to comply with a requirement that is not clear to them and that no one is providing assistance in clarifying it.

In recognition of the need to comply with the new law, some SEAs have tailored their respective evaluation systems to meet with the exact wording of the Regulation and they will collect information only on those items suggested as indicators of "quality" and "effectiveness" (i.e., "program planning and operational processes," "teacher/pupil ratios," "guidance, counseling and placement and follow up services," "teacher qualifications" et al.) In some cases, state officials report that these items have been included, only to satisfy the specifications set forth in the 1977 Regulations. Indeed, several SEAs have indicated that the items required by the federal Regulations will not provide state staff with indicators of program "quality" which are useful for program planning and improvement at the state or local levels.

5. Inaccuracy in Reporting

Several states have also found that there are problems in the way forms, especially enrollment forms, are filled out by school personnel. This problem may, however, be more widespread, although the states are either unaware of it or do not report it, as indicated in the 1973 Project Baseline report.[14] These difficulties appear to stem from inaccurate counts reported at the school or district level. One SEA

(Kentucky) reported that accuracy has been such a problem in that state that much of the information collected was useless for analysis and reporting, since it provided a distorted picture of the actual program enrollment. Kentucky plans to conduct, this summer, workshops throughout the state to improve counting and forms completion techniques at the district level.

6. Summary

The problems described above vary in intensity across the states. In most cases, SEAs will attempt to conduct evaluations despite these difficulties, in order to comply with the new legislation. SEAs recognize, however, that in the first year of evaluation, especially in SEAs which have not evaluated before or whose systems have not been extensively pilot tested, new, unanticipated problems may be expected to arise. States recognize that the first year of evaluation may result in the need to further modify practices and procedures. The problems, discussed above, however, are not seen as amenable to solution without guidance and assistance from the Federal level.

F. Conclusions

In examining the state-of-practice in vocational education evaluation, it became evident that the 1976 Amendments and 1977 Regulations have generated a great deal of activity, as SEAs prepare to meet the new mandate to evaluate programs on a systematic basis. This is especially true for states which did not conduct program evaluations prior to the new legislation and now must gear up in a single year to comply with the law. This holds true also for SEAs whose pre-1976 evaluation systems differed considerably from the requirements of the 1976 law and the ensuing Regulations. The following conclusions reflect the transitory nature of the state-of-practice in the Spring of 1978, as states prepare to comply with the new law through the development of new evaluation practices and procedures or the modification of existing practices and procedures.

- In general, states have been more concerned with the issue of compliance--having some evaluation procedures in place for use in 1978-79--than with the development of a comprehensive and methodologically sound evaluation system. The concern with compliance stemmed from the time pressure many SEAs feel in having to develop an evaluation system within a short period and often without any additional resources (i.e., funds and staff). Furthermore, the evaluation requirements specified in the law necessitate evaluation knowledge and expertise which many state staff do not have.

- Of the three evaluation components specified in the Regulations, states' efforts have largely centered on the development or revision of the program review and follow up components. Little effort has been expanded by states in the area of student achievement. This is mainly due to the unavailability of validated and

widely accepted measures of "student achievement" as well as to state officials' lack of clarity about the nature of the requirement and SEAs' expressed concern that student achievement levels for their state would be compared with those in other states.

- Considerable effort is still required in developing and refining follow up evaluations, particularly with respect to the employer satisfaction survey. Of special concern to states are methods for identifying appropriate employer samples, procedures for obtaining adequate student and employer response rates, criteria for consistently determining "job relatedness", and mechanisms for employers' assessment of satisfaction with vocationally educated employees compared to non-vocationally educated employees without invasion of student privacy.

- The extent to which SEA evaluation systems are in compliance with the new law is not yet evident, owing to the tentative nature of many of the materials and procedures. Since few states systematically evaluated programs prior to the 1976 law, many SEAs will be using new or revised evaluation procedures for the first time in 1978-79 and may in the course of the first year, encounter unanticipated problems which may prevent or alter the collection of the required information.

- Most states, however, will not be in full compliance with the law in 1978-1979, since they have not developed a comprehensive--three component--evaluation system. Many SEAs have decided to delay action on the student achievement and employer satisfaction components.

- Also lacking from current state evaluation procedures is a formal dissemination and utilization mechanism which specifies how evaluation data are used for program planning and improvement. In fact, the use made of evaluation results is the least documented element of state practices. This may be a result of states' attitude to or perception of evaluation in general and their inexperience in using evaluation data in particular.

- States' current evaluation activities are shifting from a decentralized evaluation effort in which LEA and institutional staff design, implement and analyze evaluations to state controlled system in which the SEA designs standardized evaluation instruments, delineates evaluation procedures, and aggregates and analyzes the data. Although some states will continue to rely on local staff to conduct actual evaluations, the content of the evaluations will largely be determined at the state level.

- The data generated as a result of the 1976 Amendments require efficient data processing capabilities at the state level. State MIS systems which have the capacity to store individual student

and staff files are relatively uncommon at the present time, thus contributing to the weakness of the dissemination and utilization component. Only one SEA has the current capacity to link in-school student data, student achievement scores, and a longitudinal record of students' post-program employment experience.

Although the vocational education evaluation state-of-practice has been dramatically revived as a result of the 1976 Education Amendments and the ensuing 1977 Regulations, it is, at present in a transitory state and demands considerable further effort. It is difficult therefore to identify examplary evaluation systems at this point; it is more appropriate to single out "best practices" which have been used successfully in the past and have withstood changing needs for information. These practices which are more fully described in the State Descriptions Report, include the Ohio and North Carolina systems; Illinois' and Florida's program review procedures; and Minnesota's and Oklahoma's follow-up survey procedures.

1. A state vocational education evaluation system requires the presence of three components; program planning and operation processes, student achievement, and student employment success. Two states have, over time, developed the necessary components for evaluation:

a. Ohio's evaluation system is characterized by a two phase program review (i.e., self-study and on-site visit), standardized testing instruments for the assessment of student achievement, and a statewide locally conducted follow up of former students and employers. The most recent development in the Ohio evaluation effort is the addition of an employer survey which will be implemented for the first time, after preliminary pilot testing in 1977-78, in the coming year. Ohio, one of the first states in the nation to design a statewide evaluation system for vocational programs, has made minor modifications in its original evaluation design to overcome implementation difficulties and to respond to changing information needs over the eight years of its existance. The program review component has served as a model for evaluation which has been adapted by other states and other general education programs in the state of Ohio.

b. North Carolina's evaluation system is similarly comprised of the three basic components required by the 1977 Regulations: program review procedures, standardized student achievement testing and former student and employer follow up surveys. In the past year, the SEA has designed an automated linkage system to create longitudinal files on students in-school and after they have left the program; specifically, the file contains all student assignments, test scores for every class taken, teachers, and employment experience in the first, third, and fifth year after leaving the program. Thus, the state now has a mechanism which combines the data generated by the three evaluation components for greater efficiency in information retrieval and analysis. As in Ohio, the SEA provides considerable resources (especially staff) for the conduct of evaluation.

2. Best practices for evaluating program planning and operational processes:

   a. Illinois' program review procedures not only accomplish a systematic, indepth program evaluation, but also provide a mechanism which ties the evaluation findings to the LEA and SEA planning processes. Specifically, the evaluation findings are made available to a broad spectrum of local staff and are used both to implement recommendations for program improvement and as a basis for future annual plans by District Boards of Education. The on-site phase of the program review is conducted by a wide variety of educators and lay persons who are knowledgeable about the inherent needs of vocational programs. The site visits, which last from four to five days per site, are structured to provide evaluators sufficient time for a careful examination of program operations, interviews, and feedback to local officials.

   b. The Florida program review maximizes the use of scarce staff resources through extensive self study by local staff and an on-site visit by an independent consultant who compares his or her findings with those of the LEA. The consultant reexamines each evaluation topic included in the self study, usually in greater detail. Differences between the LEA and the consultant's findings are discussed at the end of the site visit. The use of a single consultant has enabled Florida to evaluate more than 1,500 vocational programs in a single year.

3. For follow up surveys of former students and employers:

   a. Minnesota's state based follow up survey was begun in 1970 and has continued, with minor modifications over the years, under the direction of a private computer firm. All secondary students and their employers are contacted. Repeated attempts to contact students who do not respond to initial follow up questionnaires has resulted in an 80% response rate. Respondents are also asked to identify employers who are subsequently contacted; the majority of students are willing to provide information on their place of employment. Minnesota views the findings of follow up surveys as an integral part of the effort to evaluate program quality.

   b. Oklahoma has successfully utilized a different follow up strategy. Specifically, follow up surveys of former students and employers are carried out by teachers, who are responsible for maintaining contact with former students and collecting post-program information from them. The surveys are, however, controlled from the SEA level, so that all information collected statewide is compatible and can be entered into a central survey file. The storage and retrieval of follow up data is handled, under contract, by staff at the Oklahoma State University.

The 1976 Education Amendments and the ensuing Regulations set forth evaluation requirements which many states found difficult to implement.

Considerable effort was undertaken by states to gear up for the new evaluation requirements. These efforts included the modification of existing procedures and the development of new procedures. States are therefore at the present in a transitory phase, with further additions, revisions, and pilot testing needed before the new and revised evaluation systems are fully in compliance. This report described the transitory state-of-practice. Further research is necessary in the next one or two years when states have implemented their new evaluation systems to more accurately describe the state-of-practice and assess state compliance.

Footnotes

1. Comptroller General of the United States. Report to the Congress: What is the Role of Federal Assistance for Vocational Education? Office of Education, DHEW. Washington, D.C., 1974, p. 2.

2. Hearings before the Subcommittee on Elementary, Secondary and Vocational Education of the Committee on Education and Labor, U.S. House of Representatives, Ninety-Fourth Congress, HR. 19 and Related Bills, p. 1671.

3. PL 94-482, Sec. 107, 108, 112 (1) (b).

4. Regulations 104-402, October 233, 1978.

5. PL 94-482 (Sec. 107, 108, 112 (a) (b).

6. Interview with Dayton Perry, April 1978.

7. Program Standards for Quality, Durkee, J. and Rowles R., Department of Vocational Education, State Department of Education and Univ. of Wyoming, 1976.

8. Ibid.

9. "Program Review for Care and Guidance of Children," Ohio Department of Education, May 1977.

10. COPES Chancellor's Office, California Community Colleges; Sacramento, California, August 1973.

11. Alaska, Kansas, Kentucky, Michigan, New Hampshire, New Jersey, and South Dakota have not finalized the evaluation topics they intend to include in their respective systems.

12. New Mexico, however conducts Annual Program Reviews in the form of self studies; it conducts site visits on a six year interval.

13. Data on special populations are mostly collected as part of the student information category. States have not thus far devised methodologies for the evaluation of special populations' achievement or employment success. State evaluation procedures do not differentiate between regular vocational students and special populations.

14. Lee, A.M.; Project Baseline: "Learning a Living Across the Nation," Vol. II, p. 20.